

CLAIMS

1. An optical component carrier apparatus adapted to hold a plurality of fiber optic cables and optical components, comprising:
 - a body having a top, bottom, and sidewall members that cooperatively define an optical component storage region;
 - a plurality of component storage apparatuses disposed within the component storage region; and
 - at least one clamp apparatus coupled to at least one of the sidewall members and adapted to grip at least one of the optical components and the plurality of fiber optic cables.
2. The apparatus of claim 1, wherein the body further comprises a mid member and a back wall member, wherein the mid member, sidewall member, and back wall member define an assembly holding region configured to hold the plurality of component storage apparatuses therein.
3. The apparatus of claim 2, wherein the mid member and sidewall member are separated by a plurality of partitions disposed about horizontal, parallel, and spaced to hold one of the plurality of fiber optic cables and optical components therebetween.
4. The apparatus of claim 1, wherein each of the plurality of component storage apparatuses comprise an annular component holder and two outer covers disposed about the annular component holder, wherein the two outer covers form a flexible fiber optic cable clamp therebetween.
5. The apparatus of claim 4, wherein the annular component holder comprises a c-shaped member defining a component holding region therein, wherein the c-shaped member is adapted to hold at least one of the plurality of fiber optic cables thereon.
6. The apparatus of claim 1, wherein the at least one clamp apparatus is slidably disposed between the sidewall member and a front wall of the body.

7. The apparatus of claim 6, wherein the clamp apparatus comprises a sliding member in slidable engagement with a notch of the sidewall member wherein the sliding member cooperates with the notch of the sidewall member to grip at least one of the plurality of components and one of the optical fibers therebetween.

8. The apparatus of claim 7, wherein the sliding member moves about orthogonal to a longitudinal axis of one of the plurality of components and the one of the optical fibers.

9. The apparatus of claim 7, wherein the sliding member comprises an engaging member adapted to allow a desired travel of the sliding member to release and grip one of the plurality of components and one of the optical fibers within the notch.

10. An optical component carrier apparatus adapted to transport a plurality of fiber optic cables and optical components between optical component processing stages of an optical component processing system, comprising:

an enclosure adapted store at least one of the plurality of fiber optic cables and optical components therein; and

a clamp apparatus disposed on the enclosure and adapted to hold the at least one of the plurality of fiber optic cables and optical components in a processing position with respect to the optical component processing stages.

11. The apparatus of claim 10, wherein the optical component carrier apparatus includes a front member, sidewall members, top member, and a bottom member that define the enclosure.

12. The apparatus of claim 10, wherein the clamp apparatus comprises a clamp member slidably coupled to the enclosure, the clamp member being moveable between a component release position and a component holding position.

13. The apparatus of claim 12, wherein the clamp member when positioned in the component holding position is configured to cooperatively operate with a component holding notch disposed on the enclosure to hold one of the plurality of fiber optic cables and optical components therebetween.

14. The apparatus of claim 10, wherein the enclosure is adapted to hold at least one component storage apparatus.

15. The apparatus of claim 14, wherein the at least one component storage apparatus comprises a component holder and two outer covers disposed about the component holder, wherein the two outer covers form a flexible fiber clamp therebetween.

16. The apparatus of claim 15, wherein the component holder comprises a c-shaped member defining a component holding region therein, where the c-shaped member is adapted to hold at least one of the plurality of fiber optic cables thereon.

17. An optical component carrier apparatus adapted to hold a plurality of optical components, comprising:

an enclosure having a front wall, sidewalls, a bottom, and a plurality of partitions defining a plurality of storage compartments, wherein each of the plurality of storage compartments are adapted to hold at least one component storage apparatus and at least one of a plurality of optical components therein; and

a clamp apparatus slidably mounted to the front wall and adapted to hold the at least one of the plurality of optical components in a processing position.

18. The apparatus of claim 17, wherein the component storage apparatus comprises an annular component holder and two outer covers disposed about the annular component holder, wherein the two outer covers form a flexible fiber optic cable clamp therebetween.

19. The apparatus of claim 17, wherein the clamp apparatus comprises a sliding member that cooperates with a notch disposed on the front wall to grip one of the plurality of components therebetween.

20. The apparatus of claim 19, wherein the sliding member comprises a inner surface in sliding contact with an inner surface of the front wall and an actuator member extending through a slot in the front member adapted to move the sliding member between a component release and a component gripping position.

21. An optical component carrier apparatus adapted to hold a plurality of fiber optic cables and optical components, comprising:

a bottom, a back wall, a front wall, and a pair of sidewalls that cooperatively define an enclosure having a component storage region therein,

a front member disposed about parallel to and adjacent the front wall, wherein the front member includes a v-shaped notch thereon adapted to hold one of the plurality of fiber optic cables or one of the optical components therein;

a mid member disposed about orthogonal to the sidewalls and the bottom and disposed between the front wall and the back wall, wherein the mid member, the pair of sidewalls, and the back wall define an assembly holding region configured to hold at least one component storage apparatuses therein;

a plurality of partitions disposed generally parallel to the pair of sidewalls, and about orthogonal to the front wall and the bottom, wherein the front member, the partitions, and the mid member define a plurality of individual component assembly slots configured to hold at least one fiber optic cable therein having at least one of the plurality of optical components thereon; and

a clamp apparatus disposed between the front member and front wall, wherein the clamp apparatus is adapted to clamp one of the plurality of optical components or one of the plurality of fiber optic cables within the v-shaped notch.

22. The apparatus of claim 21, wherein the mid member, the pair of sidewalls, and the bottom define an assembly holding region adapted to hold the at least one component storage apparatuses therein.

23. The apparatus of claim 21, further comprising a top member disposed on the enclosure and adapted to provide a cover for at least some of the component storage region.

24. The apparatus of claim 21, wherein the clamp apparatus includes a sliding member slidably disposed between the front member and the front wall.

25. The apparatus of claim 24, wherein the sliding member includes a clamp member that is adapted to hold one of the plurality of optical components or one of the plurality of fiber optic cables within the v-shaped notch.

26. The apparatus of claim 25, wherein the clamp apparatus further includes an engaging member coupled to the sliding member wherein the engaging member is adapted to position the clamp member toward or away from the v-shaped notch to allow one of the plurality of optical components or one of the plurality of fiber optic cables to be clamped therebetween.

27. The apparatus of claim 26, wherein the front member includes a slot therein and wherein the engaging member is disposed within and in sliding engagement with the slot, wherein the slot is adapted to allow a desired travel distance of the clamp member toward or away from the v-shaped notch.

28. The apparatus of claim 26, wherein the clamp apparatus is spring biased to impart a clamping force on one of the plurality of optical components or one of the plurality of fiber optic cables disposed within the v-shaped notch.